Robust Knowledge Base Enhances Warfighting Capabilities

Portal opens doors to one-stop service.

The U.S. Army is putting the power of Web technology behind its transformation into a knowledge-based force. The effort aims at improving the decision dominance of individual soldiers and the Army as a whole by sharing information and making its cumulative expertise a powerful instrument.

One key to this initiative is the Army Knowledge Online (AKO) portal, which provides service members with Web-based tools that allow them to share knowledge and work more effectively. The portal is set to support 1.2 million users this fiscal year and enables soldiers and Department of the Army personnel to quickly locate and obtain the latest information on subjects they choose. Among the items accessible through the AKO is information about Army installations, travel, training, news and AKO Knowledge Centers across the service.

According to Lt. Col. Roderick K. Wade, USA, director, AKO, the project started in 1997 as America's Army Online (A2O). Gen. Dennis J. Reimer, USA, then chief of staff of the Army, wanted to be able to simultaneously reach all of his General Officers (GOs) rather than just a few.

"He used the A2O system to query and get feedback from the GOs on various topics," Col. Wade explains. Upon seeing some success in receiving broad-based feedback from the GOs and experiencing the ability to disseminate information to them, he decided that A2O should be expanded to allow for a greater audience than just the General Officers. He wanted information to be available from anywhere at any time.

"In concert with this expansion in scope, the project was transitioned to the Office of the Director of Information Systems for Command, Control, Communications and Computers and renamed AKO," he continues.

Concurrently, the Army began developing its publicly accessible World Wide Web page. The AKO became the private intranet page for communications within the service, while the Army's Web page was designed as a vehicle to communicate with the public, the colonel relates.

The AKO-N is the portal's nonsecure Internet protocol router network (NIPRNet), whereas the AKO-S is the secret Internet protocol router network (SIPRNet). The nonsecure portal supports all active duty and Army National Guard and Reserve soldiers as well as the department's retirees and civilian personnel. It is accessible from any Internet connection and allows users to access forms and regulations, change-of-station information, news and AKO Knowledge Centers.

The AKO's e-mail system features a standardized secure-socket-layer e-mail capability for all soldiers and Army civilian personnel. The e-mail account is valid for the entire length of service wherever the individual is stationed.

The search engine focuses exclusively on the .mil domain. It searches by key word or general category and automatically sorts documents by relevance or by date. It currently includes more than 750,000 documents and will feature more than one million documents

in the near future, Col. Wade says. The Army White Pages serves as a servicewide locator and permits users to find anyone with an AKO account.

The AKO-S is the corporate knowledge interface for Headquarters Department of the Army (HQDA). It integrates existing SIPRNet content with HQDA content and serves as both an executive communications tool and an information repository for action officers. The AKO-S features the required level of information assurance for sensitive and classified data and incorporates state-of-the-art technologies for knowledge management. An integrated collaborative interface provides roles-based access controls with entry into domain searches, SIPRNet searches, weather, news, notional and joint intelligence, and a personalized knowledge template.

One of the first projects within the AKO was the career field designation process, which was created as part of the Officer Personnel Management System XXI, Col. Wade explains. "In the spring of 1998, the Army collected career field preference statements from officers via the Web rather than using bulk paper mailings. The intent was to continue to expand the services beyond just career-field to other personnel self-service applications," he relates.

And expand it did. The first portal was deployed in November 1999 and provided account holders with an e-mail account and a page that the user could personalize. "Since then we have updated the content, layout and technologies associated with the portal to enable more online self-service transaction processes, allow more information to be accessible by the individual, and increase the ability of the Army to push information to targeted groups of individuals," Col. Wade says.

A Defense Finance and Accounting Service (DFAS) initiative is an example of how information is being disseminated to Army personnel. DFAS now e-mails travel voucher information to everyone who is assigned to temporary duty or has a permanent change of station. This data includes the amount and date the funds were sent to their bank accounts. "Eventually submission will be online; however, this is a strong first step to increase customer service to each soldier," the colonel maintains.

A joint memorandum issued last August by Gen. Eric K. Shinseki, USA, Army chief of staff, and Thomas E. White, secretary of the Army, mandated that all soldiers and Department of the Army civilians obtain AKO accounts. Today, there are approximately 800,000 account holders, a number that is growing by an estimated 15,000 per week.

By the end of 2001, more than 90,000 individuals had customized their personal pages with "channels" of information that are essentially links to focused groupings of information. For example, the Distance Learning channel bundles several of the Army's programs into one area, eliminating the need to go to five different sites to locate them. A Pay Tables channel contains not only salary information for the military and civilian sectors but also a link to the DFAS site where users can obtain their leave and earning statement (LES), modify their tax withholdings or adjust their Thrift Savings Program online. "AKO also has about 20,000 people per day use the search engines of the .mil domains and the AKO White Pages to locate people within the Army," Col. Wade shares.

To provide these services, the AKO employs a number of technologies. The portal itself uses the ATG Dynamo e-business platform developed by Art Technology Group Incorporated. ATG Dynamo is run on Sun Microsystems servers. Sun's iPlanet Messaging Server supports the e-mail system, and the iPlanet lightweight directory access protocol (LDAP) supports directory services. The search engines include

Autonomy, Inktomi, Verity and Semio. Bantu IM on Dell servers running Red Hat Linux provides instant messaging service.

Some of the Knowledge Centers associated with the AKO run the Lotus Domino and Quickplace applications on Dell servers with the Microsoft Windows NT operating system. The online help ticketing system, called Right Now Web, also runs on Windows NT.

Because information assurance is paramount, one of the key technologies is the extensive use of secure-socket-layer technology, which ensures the privacy of the Army's information as it moves over the Internet and NIPRNet, the colonel emphasizes.

The AKO addresses several challenges the Army currently faces. "First, it is a single private site for Army individuals to go to—single-stop shopping—to get information and to start conducting business via the Web. As part of this, we are working with other sites so we can provide links.

"We also provide a single authenticating mechanism that is one user ID and password. Eventually, this security authentication will be conducted using only the Common Access Card. Some of the legacy and non-Army sites, such as DFAS, still require a separate password and personal identification number; however, we are taking steps to simplify that process for the soldier," Col. Wade explains.

But the AKO is about more than just convenience. As a knowledge management tool, the initiative will simplify the process of finding the right information quickly. Because each person has a single account for the length of service—including retirement—it will be easier to locate the people who have expertise in certain areas, the colonel relates.

The AKO also addresses the problem of sharing information within such a large, widely dispersed organization. "AKO provides a mechanism for the Army to put information out to groups of individuals. This assists the chain of command in getting specialized and general information out to the masses across all the continents and time zones. The intent is not to replace the chain of command but rather to enhance the ability to do that quickly," Col. Wade states.

Despite the benefits, introducing a system that facilitates the distribution of information to a military organization is not without problems, the colonel admits. "The biggest challenges lay in the area of adjusting the Army culture toward the sharing of information and the ongoing issue with bandwidth availability out to the furthest reaches of the Army. Solving the cultural challenges involves continuing the education process across the Army about the viability of sharing information, about streamlining processes, and about the need to simplify how information is obtained.

"What is critical in the bandwidth issue is not only to get more but also to ensure that we are properly using and configuring what we currently have. In many instances, as we troubleshoot specific issues, we find that there are configuration issues that are slowing the user's experience," Col. Wade notes.

In the future, the Army envisions the AKO as a one-stop shop for individuals to find information as well as check and update their military records. Today, in preparation for the Master Sergeant Board, for example, a sergeant first class can review his or her records online to check for completeness and accuracy. Although the update still follows the same process, this capability saves many individuals the trip to Indiana to view their records personally, and it is easier and faster to identify errors. Col. Wade reveals that in a few years mechanisms will be put into place that will further improve the process.

"Key for the future will be two-way information flow—the ability for individuals to get what they need and the ability of the Army to provide information to the individuals. For example, all soldiers and civilians would be provided with links to safety publications. These are publications that most company- and platoon-level units were not aware existed," the colonel states.

"Today, the AKO is a great first place to go to find information. Today, there are some capabilities built into AKO for personal self-services. In the future, there will be many more capabilities built into AKO that will radically improve soldiers' ability to get information, have information provided to them and conduct personal self-service. This will reduce the layers of bureaucracy," he concludes.   —ML

Additional information on Army Knowledge Online is available on the World Wide Web at http://www.army.mil/ako.